

Appl. No. : 09/675,095
Filed : September 28, 2000

AMENDMENTS TO THE CLAIMS

Claims 14 and 16 are cancelled, without prejudice.

Claims 19-23 are newly added.

Claims 1, 4, 6, 7, 8, 10, 11, 15 and 17 are amended.

1. (Currently Amended) A sensor array comprising: a substantially constant resolution portion comprising a first series of first concentric closed rings, each first closed ring comprising a monodimensional array of equally spaced sensor element location sites, each location site including at ~~least~~least one sensor element; and a spatially variant portion comprising a second series of second concentric closed rings, the second series being concentric with the first series and each second closed ring comprising a monodimensional array of equally spaced sensor element location sites, each location having at least one sensor element, the spatially variant portion surrounding ~~or being surrounded by~~ the substantially constant resolution portion, and the density of sensor element location sites continuously increasing or decreasing between the substantially constant resolution portion and the spatially variant portion.

2. (Original) The sensor array according to claim 1, wherein the number of sensor element location sites in each first closed ring is defined by the i^{th} closed ring having n sensor element location sites and the $i + 1^{\text{th}}$ closed ring having $n + m$ sensor element location sites where n is not equal to 1.

3. (Original) The sensor array according to claim 1 or 2, wherein the aspect ratio of any sensor element location site with reference to its neighbors is between 2.1 and 0.6.

4. (Currently Amended) The sensor array according to ~~any previous claim~~ claim 1 or 2, wherein the closed rings are circles or ellipses.

5. (Previously Presented) The sensor array according to claim 4, wherein m is an integer lying in the range $> \text{or} = 3$ and $< \text{or} = 10$.

6. (Currently Amended) The sensor array according to ~~any previous claim 1 or 2~~, wherein the spatially variant portion has a log polar sensor element location site density.

7. (Currently Amended) The sensor array according to ~~any previous claim 1 or 2~~, wherein the number of sensor element location sites in each second closed ring of the second series is constant.

8. (Currently Amended) The sensor array according to ~~any previous claim 1 or 2~~, wherein the density of sensor element location sites in the substantially constant resolution portion merges smoothly into the density of the sensor element location sites in the spatially variant portion.

9. (Original) The sensor array according to claim 8, wherein a first ring of the first series which is adjacent to a second ring of the second series has the same number of sensor element location sites as that second ring.

10. (Currently Amended) The sensor array according to ~~any previous claim 1 or 2~~, wherein the ~~the~~ sensor element location sites in the $i^{\text{th}} + 1$ second closed ring has the sensor element location sites moved by half the distance between the sensor element location site of that ring compared with the i^{th} second closed ring.

11. (Currently Amended) A substantially constant resolution sensor array comprising a first series of concentric closed rings, each closed ring comprising a monodimensional array of equally spaced sensor element location sites, each location having at least one sensor element, in which the number of sensor element location sites in each closed ring is defined by the i^{th} closed ring having n sensor element location sites and the $i + 1^{\text{th}}$ closed ring having $n + m$ sensor element location sites where n is not equal to 1, and the envelope through the middle of the sensor element location sites of one closed ring is a closed smooth curve, and wherein the

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substantially constant resolution sensor array is surrounded by a second series of concentric closed rings having separate sensor element location sites which are arranged to form a spatially variant sensor array, and the density of sensor element location sites being continuously increasing or decreasing between the arrays.

12. (Original) The substantially constant resolution sensor array according to claim 11, wherein the aspect ratio of any sensor element location site with reference to its neighbors is between 2.1 and 0.6.

13. (Original) The substantially constant resolution sensor array according to claim 11 or 12, wherein m lies in the range ≥ 3 and < 10 .

14. (Cancelled)

15. (Currently Amended) The substantially constant resolution sensor array according to claim 14 11, wherein the spatially variant array has a log polar sensor element location site density.

16. (Cancelled)

17. (Currently Amended) The substantially constant resolution sensor array according to claim 16 11, wherein the number of sensor element location sites in each closed ring of the second series is constant.

18. (Previously Presented) A camera comprising a sensor array in accordance with claim 17, the sensor array including radiation sensitive sensor elements.

19. (New) A sensor array, comprising:

a substantially constant resolution portion comprising a first series of first concentric closed rings, each first closed ring comprising a monodimensional array of equally spaced sensor element location sites, each location site including at least one CMOS pixel element; and

a spatially variant portion comprising a second series of second concentric closed rings, the second series being concentric with the first series and each second closed ring comprising a monodimensional array of equally spaced sensor element location sites, each location having at least one CMOS pixel element,

wherein the spatially variant portion surrounds the substantially constant resolution portion,

and wherein the density of sensor element location sites is continuously increasing or decreasing between the substantially constant resolution portion and the spatially variant portion,

and wherein the sensor array forms a CMOS imaging device.

20. (New) A sensor array comprising: a substantially constant resolution portion comprising a first series of first concentric closed rings, each first closed ring comprising a monodimensional array of equally spaced sensor element location sites, each location site including at least one sensor element; and a spatially variant portion comprising a second series of second concentric closed rings, the second series being concentric with the first series and each second closed ring comprising a monodimensional array of equally spaced sensor element location sites, each location having at least one sensor element, the spatially variant portion being surrounded by the substantially constant resolution portion, and the density of sensor element location sites continuously increasing or decreasing between the substantially constant resolution portion and the spatially variant portion.

21. (New) The sensor array according to claim 1 or 20, wherein each sensor element comprises electronics technology.

22. (New) The sensor array according to claim 21, wherein each sensor element comprises a CMOS pixel.

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23. (New) The sensor array according to claim 21, wherein each sensor element comprises a MOS pixel.